IG700

User's Installation and

Configuration Manual

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Introduction

IG-700 is a cutting-edge gun-type barcode scanner which is designed specifically for retail market. We add on more user-friendly functions with detachable cable that makes it more easily to be operated by the customers.

The new IG-700 supports middle to long range operation. It is absolutely a high performance gun-type scanner. It provides the customer with the most efficient solution in the market. It is perfectly suitable and definitely the best choice for any retailers who use POS environment.

Compare with expensive products, IG-700 is with competitive price, higher quality and better performance. Due to the high MTBF of every component, a long operation time is secured.

The new scanner supports several interface types. These include RS232, USB HID and USB virtual com interfaces.

Chapter 1 Product Safety

1.1 SAFETY & CAUTION

1. Please read the following safety statement carefully.
2. Please preserve this user manual for reference.
3. Before cleaning the IG-700, the user must unplug all power. Do not use liquid or spray type of detergent to clean the scanner. Please use dampish cotton cloth to clean the *scanner*.
4. The power cord must be set nearby the *scanner* for easier power connection.
5. Keep the product dry to avoid short circuit.
6. During installation, the user must set the equipment at solid table to avoid damage caused by falling.
7. Before connecting to power, please ensure the voltage is pertaining to the equipment.
8. For safety issue, please tie wire well and do not put anything on the wire.
9. Please unplug the power after using the scanner. The over clocking usage of the product may result the decline of adapter life. Do not spray any liquid on this scanner because it may cause a fire or short circuit.
10. Do not spray any liquid on this scanner because it may cause a fire or short circuit.
11. If there are following situations, please contact the qualified technician to check this product.

(a) The damage of wire or pin of power supply.
(b) The liquid infiltrates in the product.
(c) The exposure of the product in the wet environment.
(d) The equipment cannot work well.
(e) Any obvious damage that causes the scanner to fail working normally.

12. Do not storage the scanner in where the temperature lower than -20℃ (-4℉) or higher than +70℃ (158℉).

1.2 FCC WARNING

This product complies with the requirements in Part 15 of FCC.

Any operation must comply with the conditions below:

(a) The equipment will not cause any severe interference.

(b) The equipment can avoid any interference from environment.

Statement:
This product is classified as an A class product.
This product may cause some interference with the environment surrounded; the user may have to do something to avoid interference under this circumstance.

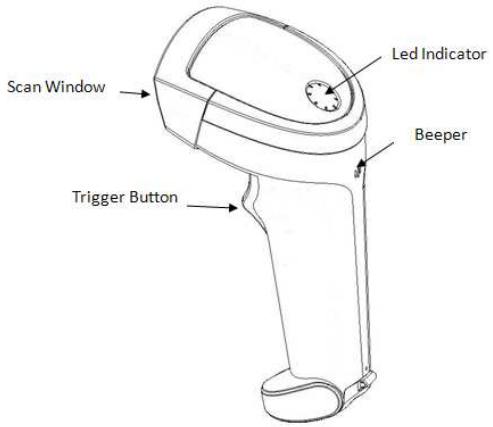
1.3 USE OF THE IG-700

IG-700 is very contemporarily designed and commonly applicable. It can be connected to POS or Host system through RS232 cable or USB cable.

To read a bar code, simply press the trigger button and aim the blue beam at the bar codes. It is required to position the beam vertically intersecting with the bar codes. The user will hear one beep, and the green LED will light on to confirm a successful scan.

The programming of the scanner is very easy. The user only needs to scan all necessary programming codes. The settings are directly saved permanently, and all settings can be disabled after scanning the factory default bar code.

Due to the powerful decoding processor, the IG-700 can decode almost all major 1D and 2D codes.



1.4 IG-700 UNPACKING

Unpack the IG-700 as follows:

1. Take the scanner and its accessories out of the box.
2. Remove the packing material.
3. Check the packing list to make sure you receive all of the items ordered.

   Standard Shipment Package

   (a) IG-700 Area Imager Handheld Bar code Scanner
   (b) Communication Cable
   (c) Power Adaptor (optional)
   (d) User Manual

4. Check the IG-700 and accessories for any physical damage.

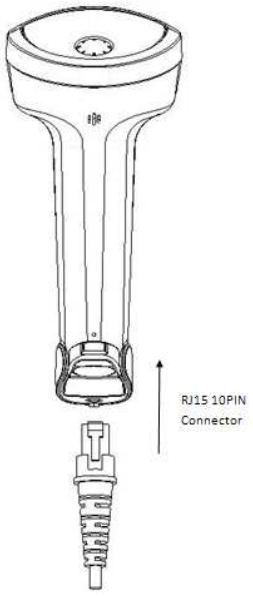
ATTENTION

The packing box should be used whenever the IG-700 is transported for service.

1.5 MOUNTING

The new IG-700 is designed for costumer-installation. Once the user unpacks all components, he/she can start installing the scanner.
The following are the steps for installation:

1. Connect the scanner to the supplied interface cable (RJ45 side).
2. Connect the scanner interface cable to the POS system.
3. Connect the power supply cable (RS232 interface) to power cable jack.
4. Plug the power supply cable into the AC outlet.



1.6 USB INTERFACE

Like all USB devices, the user must install the driver on the host system before connecting the IG-700 with USB virtual com interface.

Please contact Champtek Technical Support Department if the user needs the USB driver. The user can also download the USB driver from the web site listed below:

http://www.champtek.com/

1.7 CONFIGURATION

How to configure the IG-700:

The barcode programming features the possibility to change the scanner settings with the programming codes or with the utility tool.

1.7.1 Changing Scanner Settings with Programming Codes

The user can setup *scanner* by scanning all necessary programming codes for parameters that meet applications. The configuration change will take effect immediately and save to memory.

To go back to the factory default settings the user simply scans the factory default bar code.

1.7.2 Changing Scanner Settings with Utility Tool

Champtek provides this user manual with the most common used programming codes; it is possible that the user does not have enough programming codes to meet his/her desired operational settings.

This tool can be used with the following operation systems: Windows98, Windows2000, Windows XP and Windows Vista.

This utility tool can be delivered upon request. Please contact Champtek Technical Support Department. The USB driver can be downloaded from the Champtek web site listed below:

http://www.champtek.com/

Chapter 2 Configuration

The configuration change will take effect immediately and save to memory.

2.1 USB MODE

USB Keyboard Mode  M0002_01 A1	USB Downloader Mode  M0004_01 A2
USB Virtual COM One Way Mode  M0005_01 A3	USB Native Two Way Mode  M0006_01 A4
USB HID POS (Terminal ID 131)  M0003_01 A5	Reset to USB Factory Defaults  M0001_01 A6

2.2 RS232 MODE

RS-232 Raw Mode  M0149_01 B1	RS-232 Packet Mode  M0150_01 B2
Reset to RS-232 Factory Defaults  M0017_01 B3	RS-232 Interface 7 Data Bits  M0018_01 B4
RS-232 Interface 8 Data Bits - Default  M0019_01 B5	RS-232 Interface 1200 Baud Rate  M0020_01 B6
RS-232 Interface 2400 Baud Rate  M0021_01 B7	RS-232 Interface 4800 Baud Rate  M0022_01 B8
RS-232 Interface 9600 Baud Rate  M0023_01 B9	RS-232 Interface 19200 Baud Rate  M0024_01 B10

RS-232 Interface 38400 Baud Rate  M0025_01 B11	RS-232 Interface 57600 Baud Rate  M0026_01 B12
RS-232 Interface 115200 Baud Rate - Default  M0027_01 B13	RS-232 Interface Even Parity  M0028_01 B14
RS-232 Interface Odd Parity  M0029_01 B15	RS-232 Interface No Parity - Default  M0030_01 B16

2.3 TRIGGER MODE

Continuous Scan Both Imagers  M0127_01 C1	Continuous Scan Off - Default  M0126_01 C2
Motion Detection Scanning On  M0128_05 C3	Motion Detection Scanning Off  M0129_01 C4

2.4 SYMBOLOGY SELECTION

Aztec On - Default  M0033_01 D1	Aztec Off  M0034_01 D2
Aztec Inverse On  M0035_01 D3	Aztec Inverse & Normal  M0036_01 D4
Codabar On - Default  M0037_01 D5	Codabar Off  M0038_01 D6
Codablock F On  M0039_01 D7	Codablock F Off - Default  M0040_01 D8
Code 11 On  M0042_01 D9	Code 11 Off - Default  M0041_01 D10

Code 11 - Checksum 1 digit  M0043_01 D11	**Code 11 - Checksum 2 digit & Strip from Result**  M0044_01 D12
Code 11 - Checksum 1 digit & Strip from Result  M0045_01 D13	
Code 39 On - Default  M0046_01 D15	**Code 39 Off**  M0047_01 D16
Code 39 Enable Checksum  M0048_01 D17	**Code 39 Disable Checksum - Default**  M0049_01 D18
Code 39 Enable Checksum and Strip  M0050_01 D19	**Code 39 Extended Full ASCII On**  M0051_01 D20

Code 39 Extended Full ASCII Off - Default  M0052_01 D21	**Code 39 Short Margin On - Default**  M0053_01 D22
Code 39 Short Margin Off  M0054_01 D23	**Code 39 Trioptic On**  M0056_01 D24
Code 39 Trioptic Off  M0055_01 D25	
Code 93 On - Default  M0059_01 D26	**Code 93 Off**  M0060_01 D27
Code 128 On - Default  M0061_01 D28	**Code 128 Off**  M0062_01 D29

Code 128 Short Margin On - Default  M0063_01 D30	**Code 128 Short Margin Off**  M0064_01 D31
Composite On  M0065_01 D32	**Composite Off - Default**  M0066_01 D33
Data Matrix Rectangle On  M0067_01 D34	**Data Matrix Rectangle Off - Default**  M0068_01 D35
Data Matrix Inverse On  M0069_01 D36	**Data Matrix Inverse Off - Default**  M0070_01 D37
Enable improved reading capability for hard to decode Data Matrix symbols  M0071_01 D38	**Disable improved reading capability for hard to decode Data Matrix symbols - Default**  M0072_01 D39

GS1 DataBar Limited On  M0112_01 D40	**GS1 DataBar 14/ Truncated 14 On**  M0113_01 D41
GS1 DataBar 14 Stacked On  M0114_01 D42	**GS1 DataBar Expanded On**  M0115_01 D43
All GS1 DataBar On - Default  M0116_01 D44	**All GS1 DataBar Off**  M0117_01 D45
Int 2 of 5 On - Default  M0073_01 D46	**Int 2 of 5 Off**  M0074_01 D47
Int 2 of 5 2 Digits On  M0075_01 D48	**Int 2 of 5 2 Digits Off - Default**  M0076_01 D49

Int 2 of 5 4 Digits On  M0077_01 D50	**Int 2 of 5 4 Digits Off**  M0078_01 D51
Int 2 of 5 with Control Character Stripped  M0151_01 D52	
Maxicode On  M0079_01 D53	**Maxicode Off - Default**  M0080_01 D54
Matrix 2 of 5 On  M0081_01 D55	**Matrix 2 of 5 Off Default**  M0082_01 D56
Micro PDF417 On  M0083_01 D57	**Micro PDF417 Off - Default**  M0084_01 D58

MSI Plessy On - Default  M0085_01 D59	**MSI Plessy Off**  M0086_01 D60
Macro PDF 417 On  M0093_01 D61	**Macro PDF 417 Off - Default**  M0094_01 D62
NEC 2 of 5 On - Default  M0087_01 D63	**NEC 2 of 5 Off**  M0088_01 D64
Disable OCR - Default  M0089_01 D65	**Enable OCR**  M0090_01 D66
PDF 417 On - Default  M0091_01 D67	**PDF 417 Off**  M0092_01 D68

Postal Codes
Australian Post On


M0095_01

D69

Postal Codes
Japan Post On


M0096_01

D70

Postal Codes
KIX On


M0097_02

D71

Postal Codes
Postnet On


M0099_01

D72

Postal Codes
Planet On


M0098_01

D73

Postal Codes
Planet & Postnet On


M0100_01

D74

Postal Codes
Royal Mail On


M0101_01

D75

4-State CB On
(Intelligent Mail)


M0103_01

D76

Postal Codes
All Postal Codes Off - Default


M0102_01

D77

QR Code On  M0104_01 D78	QR Code Off - Default  M0105_01 D79
QR Code Enable Checksum  M0106_01 D80	QR Code Disable Checksum  M0107_01 D81
QR Code Inverse and Standard On  M0109_01 D82	QR Code Inverse On  M0108_01 D83
Enable All QR Code On (includes Micro QR)  M0110_01 D84	Inverse and Micro QR Code On  M0111_01 D85
Telepen On - Default  M0118_01 D86	Telepen Off  M0119_01 D87

UPC On - Default  M0120_01 D88	UPC Off  M0121_01 D89
UPC Short Margin Enabled - Default  M0122_01 D90	UPC Short Margin Disabled  M0123_01 D91
UPC Extension On - Default  M0124_01 D92	UPC Extension Off  M0125_01 D93

2.5 READ VERSION

Reader ID and Firmware Version  M0148_01 E1

2.6 LANGUAGE KEYBOARD MAPPING

US English Keyboard Mapping - Default No Leading 0

M0008_01

F1

US English Keyboard Mapping - Leading 0

M0007_01

F2

French Keyboard

M0010_01

F3

German Keyboard

M0011_01

F4

Japanese Keyboard

M0012_01

F5

Control Characters for Non Printable ASCII

M0009_01

F6

Universal Keyboard Mapping

M0013_01

F7

Enable Alternative OS (Windows CE/MAC/Unix/Linux)

M0015_01

F8

Disable Alternative OS

M0016_01

F9

2.7 PREFIX

Prefix - Comma  M0130_01 G1	Prefix - Space  M0131_01 G2
Prefix - Tab (USB Keyboard Mode ONLY)  M0132_01 G3	Prefix - Tab (RS-232 Mode ONLY)  M0133_01 G4
Prefix - Erase/None - Default  M0134_01 G5	Prefix - CRLF  M0135_01 G6

2.8 SUFFIX

Suffix - Carriage Return  M0136_01 H1	Suffix - Comma  M0137_01 H2
Suffix - Line Feed  M0138_01 H3	Suffix - Carriage Return Line Feed  M0139_01 H4

Suffix - Tab (USB Keyboard Mode ONLY)  M0142_01 H5	**Suffix - Tab (RS-232 Mode ONLY)**  M0143_01 H6
Suffix - Erase/None - Default  M0144_01 H7	**Erase Prefix & Suffix Data**  M0145_01 H8
Reader Text Commands On  M0146_01 H9	**Reader Text Commands Off - Default**  M0147_01 H10

Appendices

A.READABLE SYMBOLOGIES

Symbologies	Default Enable
Aztec	V
Codabar	V
Codablock	
Code 11	
Code 39	V
Code 93	V
Code 128	V
Composite	
DataMatrix	
GS1 DataBar (RSS)	V
Interleaved 2 of 5	V
Matrix 2 of 5	
MaxiCode	
Marco PDF417	
Micro PDF417	
MSI Plessey	V
NEC2 of 5	V
PDF417	V
Post Codes(Australian, Japan, KIX, Postnet, Planet, Royal)	
QR Code	
Telepen	V
UPC/EAN	V

B.TECHNICAL SPECIFICATIONS

Physical Characteristics

Body Weight	Approx. 150 gm
Material	ABS Plastic
Connector	RJ45C 10Pins
Dimension	82.85(L)x 75(W) x 171.3(H)mm

Operational

Light Source	Visible Red Light 650nm + 20nm
Resolution	1280 Horizontal x 960 Vertical Pixels, 256 Gray Levels.
Scan Angle	30° Horizontal, 20° Vertical on high density field 50° Horizontal, 33.5° Vertical on wide field
Pitch	±60° (from front to back)
Skew	±60° (from plane parallel to symbol(side- to-side)
Rotational Tolerance	±180°
Interface	RS-232, USB (HID KBW or Virtual Comport)
Indicators	Green = good read

Electrical Characteristics

Operation Voltage	5 VDC ±5%
Operating Current	450 mA (max) @ 5 VDC
Standby Current	37 mA typical @ 5 VDC
AC Adaptor	5.2 VDC @ 650 mA / Input AC 100-240V

Environmental

Operating Temp.	0℃ to 50℃ (32℉ to 122℉)
Storage Temp.	-20℃ to 70℃ (-4℉ to 158℉)
Relative Humidity	0 to 95% non-condensing
Ambient Light	Work in lighting conditions from 0 to 100,000 lux

Regulatory of Compliance

FCC
CE

C.SCAN MAP

Typical Reading Range (Centimeters)

Symbology	Density	Minimum Distance Inches(mm)	Maximum Distance Inches(mm)
Code 39	3mil	3.9"(100)	4.7"(120)
	7.5mil	2.0"(50)	8.0"(205)
UPC	13mil	2.0"(50)	10.8"(275)
Data Matrix	4.2mil	3.7"(9.5)	4.7"(120)
	5mil	3.7"(9.5)	5.5"(140)
	6.3mil	3.3"(85)	6.3"(160)
	10mil	1.6"(40)	7.9"(200)
	20.8mil	1.6"(40)	12.2"(310)

V00
0145-IG00011